

Impact of Low Health Literacy Skills on Annual Health Care Expenditures

Poor health literacy can have profound financial consequences. In 2001, low functional literacy resulted in an estimated \$32 to \$58 billion in additional health care costs.

According to the National Adult Literacy Survey (NALS), as many as 44 million people (age 16 and older), or 23% of all adults in the United States are functionally illiterate. An additional 28% of all adults — 53.5 million people — had only marginally better reading and computational skills. This suggests that nearly 50% of all adults may have problems understanding prescriptions, appointment slips, informed consent documents, insurance forms, and health education materials.¹

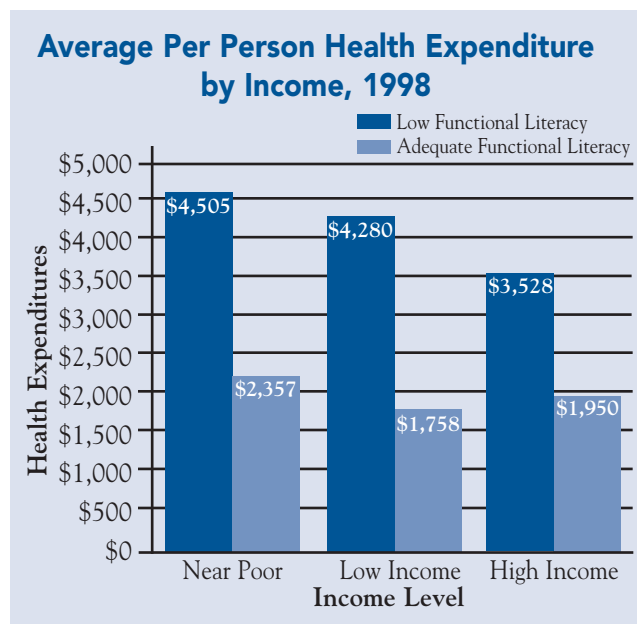
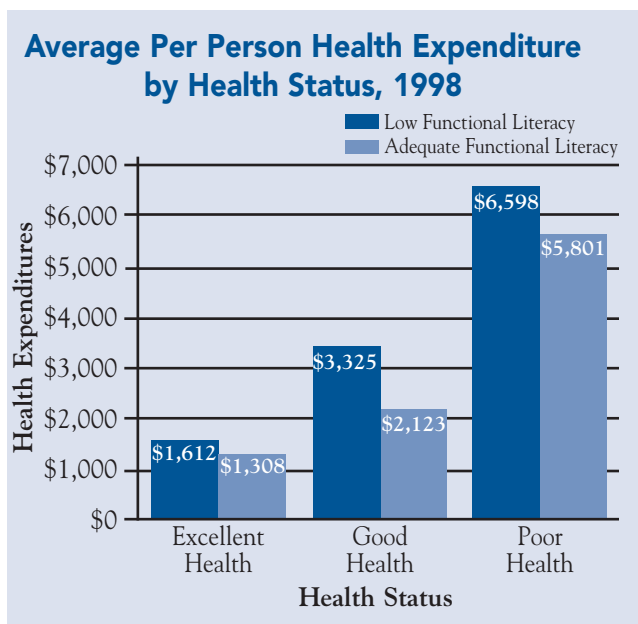
After adjusting for health status, education level, socio-economic status, and other demographic factors, people with low functional literacy have less ability to care for chronic conditions and use more health care services. In 1998, for example:

- Adults whose functional literacy was in the bottom 20% were more than 1.5 times more likely to visit a physician than adults with higher functional literacy.²
- Adults whose functional literacy was in the bottom 20% were likely to have 3 times as many prescriptions filled than adults with higher functional literacy.³

This finding was recently confirmed by modeling the probability of low functional literacy skills using data from NALS and applying those probabilities to people in the 1998 Medical Expenditure Panel Survey (MEPS).⁴ A model was estimated, using information that was similar in both NALS and MEPS that would predict the observed literacy scores in the NALS. This model included age, educational attainment, race, gender, marital status, and employment status. The study found that people whose estimated level of functional literacy was in the lowest 20% used substantially more health care services, resulting in greater health care expenditures. The study controlled for age, gender, health status, income, and type of insurance coverage.

The following tables show average expenditures per person by health status and family income among people whose estimated functional literacy is in the bottom 20% compared to the rest of the population. Average per person expenditures were greater among those most likely to have low functional literacy.

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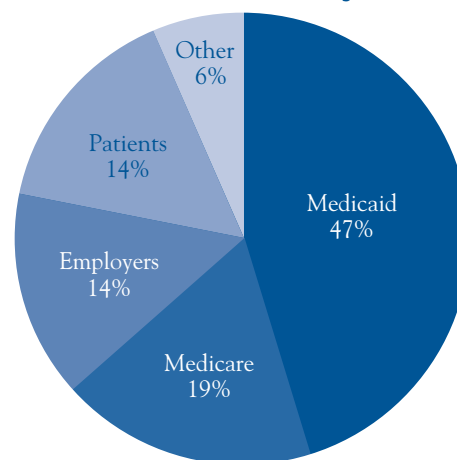
Source: Estimates from 1998 Medical Expenditure Panel Survey by the Center on an Aging Society

Comparing health care use and expenditures for all health care services by those above and those in the bottom 20% in functional literacy skills provides an estimated cost for low functional literacy. These calculations, which adjust for age, gender, income, health status, and insurance, suggest that low functional literacy results in 3 to 6% greater health care expenditures.

The direct medical costs of low functional literacy are financed through additional hospital and office visits, longer hospital stays, extra tests, procedures, and prescriptions. While all payers fund these additional resources, taxpayers finance a disproportionate share:

- Medicaid finances 47% of the additional health care expenditures.
- Medicare finances 19% of the expenditures.
- Employers may be financing as much as 14% of the additional health care expenditures for their employees and their employees' dependents.
- The patients who have the poorest health literacy skills finance 14% of these additional health care expenditures as out-of-pocket co-payments and deductibles.

Who Pays for the Cost of Low Health Literacy?



References

1. Kirsch I.S., et al. *Adult Literacy in America: A First Look at the Results of the National Adult Literacy Survey*. National Center for Education Statistics, Department of Education, 1993.
2. Center on an Aging Society tabulations from the Medical Expenditure Panel Survey, 1998.
3. Center on an Aging Society tabulations from the Medical Expenditure Panel Survey, 1998.
4. Funding for this research was provided by Pfizer Inc to the Center on an Aging Society.

The production of this Fact Sheet was made possible through funding from The Commonwealth Fund and Pfizer Inc.